

**Health  
Assessment  
for**

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ARKWOOD, INC.

OMAHA, BOONE COUNTY, ARKANSAS

AUGUST 1, 1988

Agency for Toxic Substances  
U.S. Public Health Service

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## THE ATSDR HEALTH ASSESSMENT: A NOTE OF EXPLANATION

Section 104(i)(7)(A) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended, states "...the term 'health assessment' shall include preliminary assessments of potential risks to human health posed by individual sites and facilities, based on such factors as the nature and extent of contamination, the existence of potential pathways of human exposure (including ground or surface water contamination, air emissions, and food chain contamination), the size and potential susceptibility of the community within the likely pathways of exposure, the comparison of expected human exposure levels to the short-term and long-term health effects associated with identified hazardous substances and any available recommended exposure or tolerance limits for such hazardous substances, and the comparison of existing morbidity and mortality data on diseases that may be associated with the observed levels of exposure. The Administrator of ATSDR shall use appropriate data, risk assessments, risk evaluations and studies available from the Administrator of EPA."

In accordance with the CERCLA section cited, ATSDR has conducted this preliminary health assessment on the data in the site summary form. Additional health assessments may be conducted for this site as more information becomes available to ATSDR.

## PRELIMINARY HEALTH ASSESSMENT

ARKWOOD, INC.  
BOONE COUNTY  
OMAHA, ARKANSAS  
August 1, 1988

Prepared by:  
Office of Health Assessment  
Agency for Toxic Substances and Disease Registry

### Background

The Arkwood site is listed by the U.S. Environmental Protection Agency (EPA) on the National Priorities List (NPL). The approximately 20 acre site is a former single-cylinder wood treatment facility that operated from about 1962 until 1984. Removal actions and other actions (ATSDR health consultations) have been accomplished at the site: public access restricted by partial fencing and steep topography, contaminated wastes covered by clean soil, and alternate water supplies for those residents suspected of having contaminated supplies.

The following documents were provided to ATSDR for review: various support documents dated from 1981-1987; Final Workplan, July 1986; Sampling Inspection Report, May 1987; Site Investigation Report, August 14, 1987; and the Site Status Summary, March 1988. These documents form the basis of this preliminary health assessment.

### Environmental Contamination and Physical Hazards

On-site soil has been found to be contaminated with pentachlorophenol (PCP, 10,400 ppm) and polynuclear aromatic hydrocarbons (PAH, 4,000 ppm); on-site sludge with benzene (0.11 ppm), ethylbenzene (3.2 ppm), and toluene (1.8 ppm); and liquids from a sinkhole on-site with benzene (1.3 ppm) and ethylbenzene (13 ppm). In addition, low levels (2,3,7,8-tetrachlorodibenzodioxin not detected) of dioxins and furans have been found in woodchip debris on-site, the sinkhole, and in a ditch separating the site from the bordering Missouri-Pacific railroad.

Off-site, contamination has been documented in private well water (ethylbenzene, 0.002 ppm and toluene, 0.008 ppm) and spring (surface) water (toluene, 0.004 ppm; PCP, 97 ppm, and trichloroethylene, 0.002 ppm).

## ARKWOOD, INC., OMAHA, ARKANSAS

### Potential Environmental and Exposure Pathways

Potential environmental pathways on-site are contaminated surface soil, sediments, and sludges, surface water, and production debris (woodchips). The potential human exposure pathways are skin absorption and ingestion of contaminated soils, sediments, sludges, surface water; and skin contact with contaminated woodchips. The off-site environmental pathway is groundwater. The potential human exposure pathway is ingestion and inhalation and skin absorption from cooking, bathing, and showering.

### Demographics

The closest residence to the site is 0.25 mile. Approximately 660 people live within three miles of the site. In addition, there is a school and playgrounds within 0.25 mile of the site. An Omaha city water supply well and private supply wells are located within one mile of the site.

### Evaluation and Discussion

The potential for public contact with on-site environmental media has been eliminated with the removal and remedial actions taken so far EPA and/or the principal responsible parties: restricting access to the site with a fence, restricting access to the sinkhole and contaminated surface waters, and covering contaminated waste areas with clean soil. In addition, private well users in the area who were most likely impacted by off-site migration of contaminated groundwater have been placed on alternate water supplies. However, there is insufficient data to comment on the extent of off-site surface water contamination (Cricket Creek) and its potential public health impact. It does not appear, from the information available, that Cricket Creek is used to any degree by the local population.

ATSDR has prepared, or will prepare, Toxicological Profiles on the site contaminants noted above.

### Conclusions and Recommendations

Based on the available information, this site is considered to be of potential public health concern because of the risk to human health caused by the possibility of exposure to hazardous substances via contaminated surface water and groundwater. The potential for human contact with on-site contamination has been reduced such that it is of little public health concern. Further environmental characterization and sampling of the site and impacted off-site areas during the Remedial Investigation and Feasibility Study (RI/FS) should be designed to address the environmental and human exposure pathways discussed above. When additional information and data become available, e.g., the completed RI/FS, such material will form the basis for further assessment by ATSDR at a later date.